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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,947	10/10/2001	Johji Suzuki	NE-1065-US/kmt	4846

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EXAMINER	
LY, ANH VU H	
ART UNIT	**PAPER NUMBER**
2667	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/972,947	SUZUKI ET AL.	
	Examiner	Art Unit	
	Anh-Vu H. Ly	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3-6,8,12-15,18-21,23 and 27-30* is/are allowed.

6)☒ Claim(s) *1,2,7,9,10,16,17,22,24 and 25* is/are rejected.

7)☒ Claim(s) *11 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 9, 11, 20-21, 24, 26, and 28 are objected to because of the following informalities:

With respect to claim 9, in lines 9-10, "said bus system" lacks clear antecedent basis. It is unclear which bus system, first or second bus system, being referred to.

With respect to claim 11, in line 11, "aid bus bridge" is unclear.

With respect to claim 20, in lines 1-2, "said first bus bridge" and in line 4, "said first and second bus bridges" lack antecedent basis.

With respect to claim 21, in lines 1-2, "said first bus bridge" lacks antecedent basis.

With respect to claim 24, in line 9, "said bus system" lacks clear antecedent basis.

With respect to claim 26, in line 11, "said adjacent bus systems" lacks antecedent basis and also in line 11, "- -" should be deleted.

With respect to claim 28, in line 13, a period should be inserted to terminate the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 7, 9-10, 16-17, 22, and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Olarig et al (US Patent No. 6,895,456 B2). Hereinafter, referred to as Olarig.

With respect to claims 1-2, 7, 9, 16, 17, 22, and 24, Olarig discloses a network having a plurality of bus systems interconnected by at least one bus bridge, wherein at least one node is attached to each of the bus systems, wherein the bus systems, the bridge, and the node are in compliance to a serial bus standard (Fig. 4). Olarig discloses that first and second multicast addresses are equal to each other (targets of a multicast cycle are identified by a target identification signal on a first and second multicast bus, as discloses in the abstract). Olarig discloses that the bus bridge establishes a connection between a first channel used in a first bus system of a plurality of bus systems for transmissions of packets to a first multicast address and a second channel used in a second bus system of the plurality of bus systems for transmissions of packets to a second multicast address (the bus bridge relays the data for the multicast cycle between devices, as discloses in the abstract. Herein, in order to relay the data between the master device located in one bus segment to the multiple targeted devices located in another bus segment, a connection and/or channels must be reserved and/or established by the bridge to communicate data). Olarig discloses that broadcasting a message pertaining to the channel (col. 7, lines 64-66 discloses that the peripheral device 435 on PCI bus 425 transmits a broadcast message intended to multiple targets on PCI bus 475. Herein, the broadcast message contains the channel to be used by the device 435).

With respect to claims 10 and 25, Olarig discloses converting a channel identifier contained in the multicast packet received on the first channel to the channel identifier

identifying the second channel and converting a channel identifier contained in the multicast packet received on second channel to a channel identifier identifying the first channel (the bus bridge relays the data for the multicast cycle between devices located on different bus segments, as disclosed in the abstract. Herein, in multicasting network, once the receiving bridge, switch, or router receives a data packet, the destination of the packet is mapped to the addresses of the receiving entities according to the multicast-mapping table. In the bus system, channel identifiers are addresses since the nodes must reserve a channel to transmit and/or receive data. Therefore, channel identifiers must be modified to direct the data packet).

Allowable Subject Matter

3. Claims 11 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 3-6, 8, 12-15, 18-21, 23, and 27-30 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or fairly suggest the first bus bridge acquires an interconnection channel if there is no node in the intermediate bus system participating in the multicast group and if two of the messages having an identical multicast address are received, one from the first bus system and the other from the second bus system, broadcasts a message pertaining to the interconnection channel and the multicast group and connects a first end of the interconnection channel to the channel acquired for the first bus system, as specified in independent claims 3 and 18.

The prior art does not teach or fairly suggest at least one node on each of the bus systems when operating as a receive-only node acquires a second channel if the first message is received when the bus system of the receive-only node has no node responsible for channel acquisition, and broadcasts a second message pertaining to the second channel and the multicast group, as specified in independent claims 4 and 19.

The prior art does not teach or fairly suggest receiving, at the first bus bridge, the first and second messages and acquiring a third channel for transfer of packets on the intermediate bus system if the received first and second messages indicate that the multicast addresses contained therein are equal to each other, establishing a connection between a channel identified by the received first message and the acquired third channel, and broadcasting from the first bus bridge a third message pertaining to the third channel; receiving, at the second bus bridge, the first and second messages from the first and second nodes and subsequently receiving third message from the first bus bridge if the received first and second messages indicate that the multicast addresses contained therein are equal to each other, and establishing a connection between two channels respectively identified by the second and third messages, as specified in independent claims 8 and 23.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Momona (US Patent No. 6,434,117 B1) discloses IEEE-1394 serial bus network capable of multicast communication.

Thaler et al (US Pub 2001/0037422 A1) discloses multi-portal bridge for providing network connectivity.

Olarig et al (US Patent No. 6,230,225 B1) discloses method and apparatus for multicasting on a bus.

Momona (US Patent No. 6,738,816 B1) discloses system and method for reliable real time communications among a plurality of nodes having functions conforming to IEEE 1394 serial bus and participating in a session of sharing the maximum bandwidth.

Tamori et al (US Patent No. 6,757,743 B1) discloses a system for transferring data placed on a fast serial bus conformable to IEEE 1394 over ATM network.

Iijima (US Pub 2003/0115390 A1) discloses method of reserving bandwidth for an isochronous channel on a serial bus network of devices.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Chi Pham
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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7/25/05